HPC Breakout

HPC Summary (1)

- We believe HPC offers important and necessary opportunities for HEP

- Competitive (in CPU/$) with HEP systems

- Find a way to work with what HPC systems have to offer

- Join call from user communities to make HPC more user friendly and without needless differences

- Very promising progress made at ANL (ATLAS) and UCSD (CMS) reported – not yet sufficient to give an effort estimate for integration of HPC systems into HEP computing

HPC Summary (2)

- Welcome ASCR support for making HPC accessible (e.g. wp2 in BigPanDA)
- Need to study and exploit other ASCR-funded activities in collaborative middleware
- Take advantage of OSG – e.g. access to XSEDE
- Three technical thrusts
  1. Integrate HPC into production environment (aka PanDA)
  2. Port HEP codes to each HPC system
  3. Learn how to exploit accelerators where present

HPC Summary (3)

- Why would (does) HPC want HEP
  - HEP does very visible, compute-intensive science
  - HPC centers want a broad science base and need visible science
  - HPC centers (e.g. OLCF) very interested in data-intensive computing and see HEP as a prime example
  - Some HEP software (e.g. Geant4) is very attractive to the science communities at HPC centers